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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
EWART, JAMES D	
ART UNIT	PAPER NUMBER
2683	

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/034,399	LIM, JAE DOEG	
	Examiner	Art Unit	
	James D Ewart	2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Objections

1. Claim 29 is objected to because of the following informalities: "coverage are" should be "coverage area". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless – (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 37 – 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Fong et al. (U.S. Patent No. 6,069,885).

Referring to claim 37, Fong et al teaches for use in a base station of a wireless network, a method of transmitting forward channel data into S sectors associated with the base station (Figure 5) comprising the steps of: receiving in the base station a plurality of data packets in a first data frame of a wireline connection (Column 2, Lines 14-17); associating each of the received data packets with a corresponding one of the S sectors (Column 6, Lines 62-63); and transmitting concurrently at least some of the associated data packets in the corresponding sectors during a first subframe of a first forward channel data frame (Column 6, Lines 51-65). The sectors labeled one transmit concurrently packet data during a first subframe of a first forward channel data frame and sectors labeled two transmit during the second subframe.

Referring to claim 38, Fong et al further teaches wherein the first data frame of the wireline connection has a duration T (Figure 5; t1 to t3), the first forward channel data frame has a duration T, and the first subframe has a duration less than T (Figure 5; t1 to t2).

Referring to claim 39, Fong et al further teaches further comprising the steps of: transmitting a first additional associated data packet in a first corresponding sector during a period of the first forward channel data frame following the first subframe (Figure 5 and Column 6, Lines 51-65); and transmitting a second additional associated data packet in a second corresponding sector during the period of the first forward channel data frame following the first subframe (Figure 5 and Column 6, Lines 51-65). Mobile stations in the sectors labeled one receive during a first subframe while mobile stations in the sectors labeled two receive after the first subframe.

Referring to claim 40, Fong et al further teaches wherein the first additional associated data packet and the second additional associated data packet are transmitted sequentially (Figure 5 and Column 6, Lines 62-63). Figure 5 shows packet data are transmitted sequentially in time slots.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made

> to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 21-36 are rejected under 35 USC 103(a) as being unpatentable over Fong et al. in view of Wong et al. (U.S. Patent No. 6,323,823).

Referring to claim 21, Fong et al teaches for use in a wireless network, a base station comprising directional antennas (Column 6, Line 1) capable of transmitting forward channel data into S sectors associated with said base station (Figure 5), wherein said base station receives a plurality of data packets in a first data frame of a wireline connection (Column 2, Lines 13-15), associates each of said received data packets with a corresponding one of said S sectors (Figure 5), and concurrently transmits at least some of said associated data packets in said corresponding sectors during a first subframe of a first forward channel data frame (Column 6, Lines 51-65), but does not teach using an antenna array. Wong et al teaches using an antenna array (Column 3, Lines 53-55). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Fong et al with the teaching of Wong et al of using an antenna array to present a reduced visual impact at the base station location (Column 4, Lines 24-25)

Referring to claim 29, Fong et al teaches a wireless network comprising a plurality of base stations capable of communicating with a plurality of mobile stations in a coverage area of said wireless network (Column 5, Lines 30-33), wherein a first one of said plurality of base stations comprises directional antennas (Column 6, Line 1) capable of transmitting forward channel data into S sectors associated with said first base station (Figure 5), and wherein said

first base station receives a plurality of data packets in a first data frame of a wireline connection (Column 2, Lines 14-17), associates each of said received data packets with a corresponding one of said S sectors (Figure 5), and concurrently transmits at least some of said associated data packets in said corresponding sectors during a first subframe of a first forward channel data frame (Column 5, Lines 51-65). The sectors labeled one transmit concurrently packet data during a first subframe of a first forward channel data frame and sectors labeled two transmit during the second subframe.

Referring to claims 22 and 30, Fong et al further teaches wherein said first data frame of said wireline connection has a duration T (Figure 5; t1 to t3), said first forward channel data frame has a duration T, and said first subframe has a duration less than T (Figure 5; t1 to t2).

Referring to claims 23 and 31, Fong et al further teaches wherein said base station is further capable of transmitting a first additional associated data packet in a first corresponding sector during a period of said first forward channel data frame following said first subframe (Figure 5 and Column 6, Lines 51-65). Mobile stations in the sectors labeled one receive during a first subframe while mobile stations in the sectors labeled two receive after the first subframe.

Referring to claims 24 and 32, Fong et al further teaches wherein said base station is further capable of transmitting a second additional associated data packet in a second corresponding sector during said period of said first forward channel data frame following said first subframe (Figure 5 and Column 6, Lines 51-65). Mobile stations in the sectors labeled one

receive during a first subframe while mobile stations in the sectors labeled two receive after the first subframe.

Referring to claims 25 and 33, Fong et al further teaches wherein said base station transmits said first additional associated data packet and said second additional associated data packet sequentially (Figure 5 and Column 6, Lines 51-65). Figure 5 shows packet data are transmitted sequentially in time slots.

Referring to claims 26 and 34, Fong et al further teaches wherein said base station is further capable of transmitting a first additional associated data packet in a first corresponding sector in a first dedicated time slot of said first forward channel data frame following said first subframe (Figure 5 and Column 6, Lines 51-65). Mobile stations in the sectors labeled one receive during a first subframe of their dedicated time slots.

Referring to claims 27 and 35, Fong et al further teaches wherein said base station is further capable of transmitting a second additional associated data packet in a second corresponding sector in a second dedicated time slot of said first forward channel data frame following said first subframe (Figure 5 and Column 6, Lines 51-65). Mobile stations in the sectors labeled two receive during a second subframe of their dedicated time slots.

Referring to claims 28 and 36, Fong et al further teaches wherein said first dedicated time slot and said second dedicated time slot are sequential time slots (Figure 5). Figure 5 divides the subframes into sequential time slots

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D Ewart whose telephone number is (703) 305-4826. The examiner can normally be reached on M-F 7am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (703)308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Ewart
May 2, 2005

WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600